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FIG. IA(1)

1 GCACCGCGCGAGCTGGCTGTTCTGGGGC * AG
 84 GGCCGCGACCCCTCTGACCGAGATCCTGCTG
 168 CGT GC GG CTCCGCGCTCCCCG GAAG
 GTGCCCTGGCCCCGGAGAGTGGAAATGATCCCC
 252 ACC GACACCCCTGGGGGACC TCG AT
 GGAGTCTTGAGGGACCCCCGACTCCAAGCGC
 1
 336 T C G C G
 CCTACTGATGGTGCTGTAACCACCTCACAGA
 9 P T D G A V T T S Q
 S E A S
 420 G C A G C
 TTATTAAAGTCTGTTGGTGCACAAAAAGACA
 37 L L K S V G A Q K D
 N
 504 A G C G G C
 CGATTATATGATGAGAAGCAACAAACATATTG
 65 R L Y D E K Q Q H I
 588 G G A
 GTGAAAGAGCACAGGAAAATATATACCATGA
 93 V K E H R K I Y T M
 A
 672 G C
 TCTGTGAGTGAGAACAGGTGTCACCTTGAAG
 121 S V S E N R C H L E
 L S R O P



FIG. 1A(2)

CTGTGTGGCCCTGTGTGTCGGAAAGATGGAGCAAGA

AGCCGC GC TTCTC TCG TCGAGCT TG ACGAC
CTTTCGCAGCCAGGAGCACCGTCCCTCCCCGGATT

GTCGGAA ATGCGC G AAGTAG CC T CT
GAGGCCAGGGCGTCGTGCTTCCGCAGTAGTCAGTC

ACCGCG TTCTCCT C GCCTC C
GAAAAACCCCGGATGGTGAGGAGCAGGCAAATGTGCA
M C

T
TTCCAGCTTCGGAACAAGAGACCCCTGGTTAGACCAA
I P A S E Q E T L V R P

C A A A A
CTTATACTATGAAAGAGGTTCTTTTTATCTTGGCC
T Y T M K E V L F Y L G
I I I

G C G
TATATTGTTCAAATGATCTTCTAGGAGATTGTTG
V Y C S N D L L G D L F
V

A T A G C T A G A---
TCTACAGGAACCTGGTAGTAGTCAATCAGCAGGAAT
I Y R N L V V V N Q Q E
A S -

TG T C T G C CA
GTGGGAGTGATCAAAAGGACCTTGTACAAGAGCTTC
G G S D Q K D L V Q E L
L P L A P



FIG. 1A(3)

AGCCGAGCCCGAGGGGC	83	Human nt
CATG CGCTCA G C GTGCGTACGAGCGCCCCA	167	Mouse nt Human nt
GGGCGAGC GAGACC CCCGTGAAGGAAACTGG	251	Mouse nt Human nt
ATACCAAACATGTCTGTA N T N M S V	335 8	Mouse nt Human nt Human a.a. Mouse a.a.
A AGCCATTGCTTTGAAG K P L L L K	419 36	Mouse nt Human nt Human a.a. Mouse a.a.
AGTATATTATGACTAAA Q Y I M T K	503 64	Mouse nt Human nt Human a.a. Mouse a.a.
A C G T GCGTGCCAAGCTTCTCT G V P S F S	587 92	Mouse nt Human nt Human a.a. Mouse a.a.
----- T C CATCGGACTCAGGTACA S S D S G T	671 120	Mouse nt Human nt Human a.a. Mouse a.a.
CA AGGAAGAGAAACCTTCA Q E E K P S P	755 148	Mouse nt Human nt Human a.a. Mouse a.a.



FIG. 1B(1)

TG AA TG
756 TCTTCACATTTGGTTCTAGACCATCT
149 S S H L V S R P S
D I L

G G G CC G G G GG
840 GGTGAACGACAAAGAAAACGCCACAAA
177 G E R Q R K R H K
H R R

G CAGCGGCAGCACGAGCA CAGT
924 ATATGT-----TGTGAA
205 I C - - - - C E
M S G G T S S S

G T CC
993 GTAAGTGAACATTCAAGGTGATTGGTG
228 V S E H S G D W L
C

G C G C
1077 TCAGAAGATTATAGCCTTAGTGAAGAA
256 S E D Y S L S E E
D

A A C C T
1161 GGGGAGAGTGATAACAGATTCAATTGAA
284 G E S D T D S F E

T C A
1245 AATCCCCCCCCTCCATCACATTGCAAC
312 N P P L P S H C N
K

A
1329 GAAATCTCTGAGAAAGCCAAACTGGAA
340 E I S E K A K L E



FIG. 1B(2)

T C G
ACCTCATCTAGAAGGAGAGCAATTAGTGAGACAGAAAGAA
T S S R R R A I S E T E E
S

----- G CCG G
TCTGATAGTATTCCCTTCCTTGATGAAAGCCTGGCT
S D S I S L S F D E S L A
- - - - P G

C C C G C A C C
AGAACAGTAGCAGTGAATCTACAGGGACGCCATCGAAT
R S S S S E S T G T P S N
S E H

T C G
GATCAGGATTCAAGTTCAAGATCAAGTTAGTGTAGAATT
D Q D S V S D Q F S V E F

G C G G G C G G
GGACAAGAACTCTCAGATGAAGATGATGAGGTATATCAA
G Q E L S D E D D E V Y Q
H R

G G G T
GAAGATCCTGAAATTCCCTTAGCTGACTATTGGAAATGC
E D P E I S L A D Y W K C
G

C A C A C
AGATGTTGGGCCCTCGTGAGAATTGGCTTCCTGAAGAT
R C W A L R E N W L P E D
T D

G T G A A G G G G G
AACTCAACACAAGCTGAAGAGGGCTTGATGTTCCCTGAT
N S T Q A E E G F D V P D
A L



FIG. 1B(3)

CA	GC	C			Mouse nt
AATTCAGATGAATTATCT			839		Human nt
N S D E L S			176		Human a.a.
T		P			Mouse a.a.
AGC G					Mouse nt
CTGTGTGTAATAAGGGAG			923		Human nt
L C V I R E			204		Human a.a.
E L					Mouse a.a.
A	C A	C			Mouse nt
CCGGATCTTGATGCTGGT			992		Human nt
P D L D A G			227		Human a.a.
Q		D			Mouse a.a.
G G					Mouse nt
GAAGTTGAATCTCTCGAC			1076		Human nt
E V E S L D			255		Human a.a.
					Mouse a.a.
C A C		A			Mouse nt
GTTACTGTGTATCAGGCA			1160		Human nt
V T V Y Q A			283		Human a.a.
T					Mouse a.a.
C					Mouse nt
ACTTCATGCAATGAAATG			1244		Human nt
T S C N E M			311		Human a.a.
					Mouse a.a.
G		T			Mouse nt
AAAGGGAAAGATAAAGGG			1228		Human nt
K G K D K G			339		Human a.a.
V					Mouse a.a.
G C	GCTG	C A			Mouse nt
TGTAAAAAAACTATAGTG			1412		Human nt
C K K T I V			367		Human a.a.
G L T E					Mouse a.a.



FIG. 1C(1)

1413 G T A C C G
AATGATTCCAGAGAGTCATGTGTTGAGGAA
368 N D S R E S C V E E
 A K P A

1494 C A G C C G
TCTCAGCCATCAACTTCTAGTAGCATTATT
395 S Q P S T S S S I I
 V

1578 C C CT G
GAAGAGAGTGTGGAATCTAGTTGCCCTT
423 E E S V E S S L P L
 D F S

1662 T C G T C C T A
GTCCCATGGCAAAACAGGACATCTTATGGCC
451 V H G K T G H L M A
 S

1746 G C G
AGACAACCAATTCAAATGATTGTGCTAACT
479 R Q P I Q M I V L T
 S

1830 TAACCCTAGGAATTAGACAACCTGAAATT
1914 TTAGTATAATTGACCTACTTTGGTAGTGG
1998 ACTCCTAATTTAAAATAATTTCTACTCTGT
2082 ATGTAACCTATTATTTTTTGAGACCGAG
2166 CTCTGCCCTCCCCGGGTTCGCACCATCTC
2250 TAATTTTGTACTTTAGTAGAGACAGGG
2334 CTCGGCCTCCCAAAGTGCTGGGATTACAGG



FIG. 1C(2)

G CAGC G G GGCGA GA GC C TG C
AAT---GATGATAAAATTACACAAGCTTCACAATCAC
N - D D K I T Q A S Q S
D S E E A E T P L

AGC G--- A
TATAGCAGCCAAGAACAGATGTGAAAGAGAGTTGAAAGGG
Y S S Q E D V K E F E R
S L - K

C A C C G G G
AATGCCATTGAACCTTGTGTGATTGTCAAGGTCGAC
N A I E P C V I C Q G R

T C G A A C
TGCTTTACATGTGCAAAGAACAGCTAAAGAAAAGGAATA
C F T C A K K L K K R N

C AA C CTCA A A T
TATTTCCCCTAGTTGACCTG---TCTATAAGAGAATT
Y F P N

TATTCACATATATCAAAGTGAGAAAATGCCTCAATT
ATAGTGAATACTTACTATAATTGACTTGAATATGTA
CTTAAATGAGAAGTACTTGGTTTTTTCTAAAT
TCTTGCTCTGTTACCCAGGCTGGAGTGCAGTGGGTGA
CTGCCTCAGCCTCCCAATTAGCTTGGCCTACAGTCAT
TTTCACCCTGTTAGCCAGGATGGTCTCGATCTCCTGA
CATGAGCCACCG



FIG. 1C(3)

G G C			
AAGAAAGTGAAGACTAT	1493	Mouse nt	
Q E S E D Y	394	Human nt	
D		Human a.a.	
		Mouse a.a.	
G G GC			
AAGAAAACCCAAGACAAA	1577	Mouse nt	
E E T Q D K	422	Human nt	
H		Human a.a.	
		Mouse a.a.	
C			
CTAAAAAATGGTTGCATT	1661	Mouse nt	
P K N G C I	450	Human nt	
		Human a.a.	
		Mouse a.a.	
G C			
AGCCCTGCCCGAGTATGT	1745	Mouse nt	
K P C P V C	478	Human nt	
		Human a.a.	
		Mouse a.a.	
T *			
ATATATTTCTAACTATA	1829	Mouse nt	
	491	Human nt	
		Human a.a.	
		Mouse a.a.	
ACATAGATTTCTTCTCT	1913	Human nt	
GCTCATCCTTACACCA	1997	Human nt	
ATGTATATGACATTTAA	2081	Human nt	
TCTTGGCTCACTGCAAG	2165	Human nt	
CTGCCACCACACCTGGC	2249	Human nt	
CCTCGTGATCCGCCAAC	2333	Human nt	
	2372	Human nt	



2
E

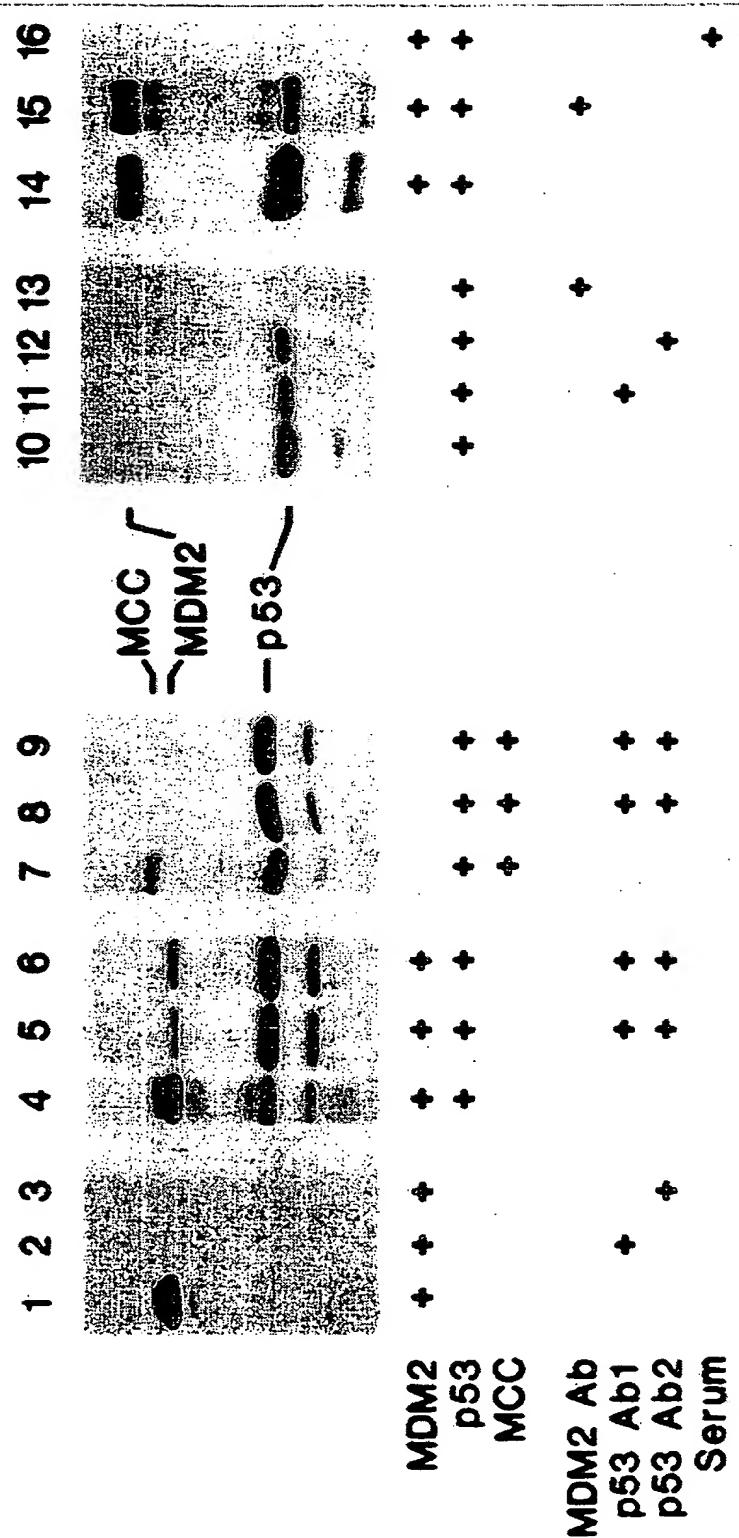
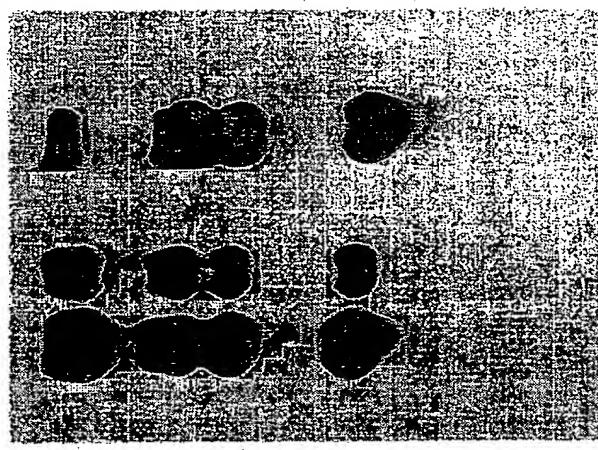
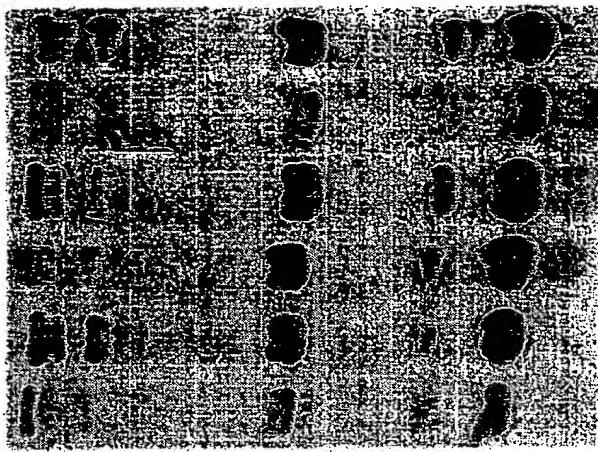




FIG. 3

1 2 3 4 5 6 1 2 3 4 5 6



6.6—
4.4—

2.0—

DCC

MDM2

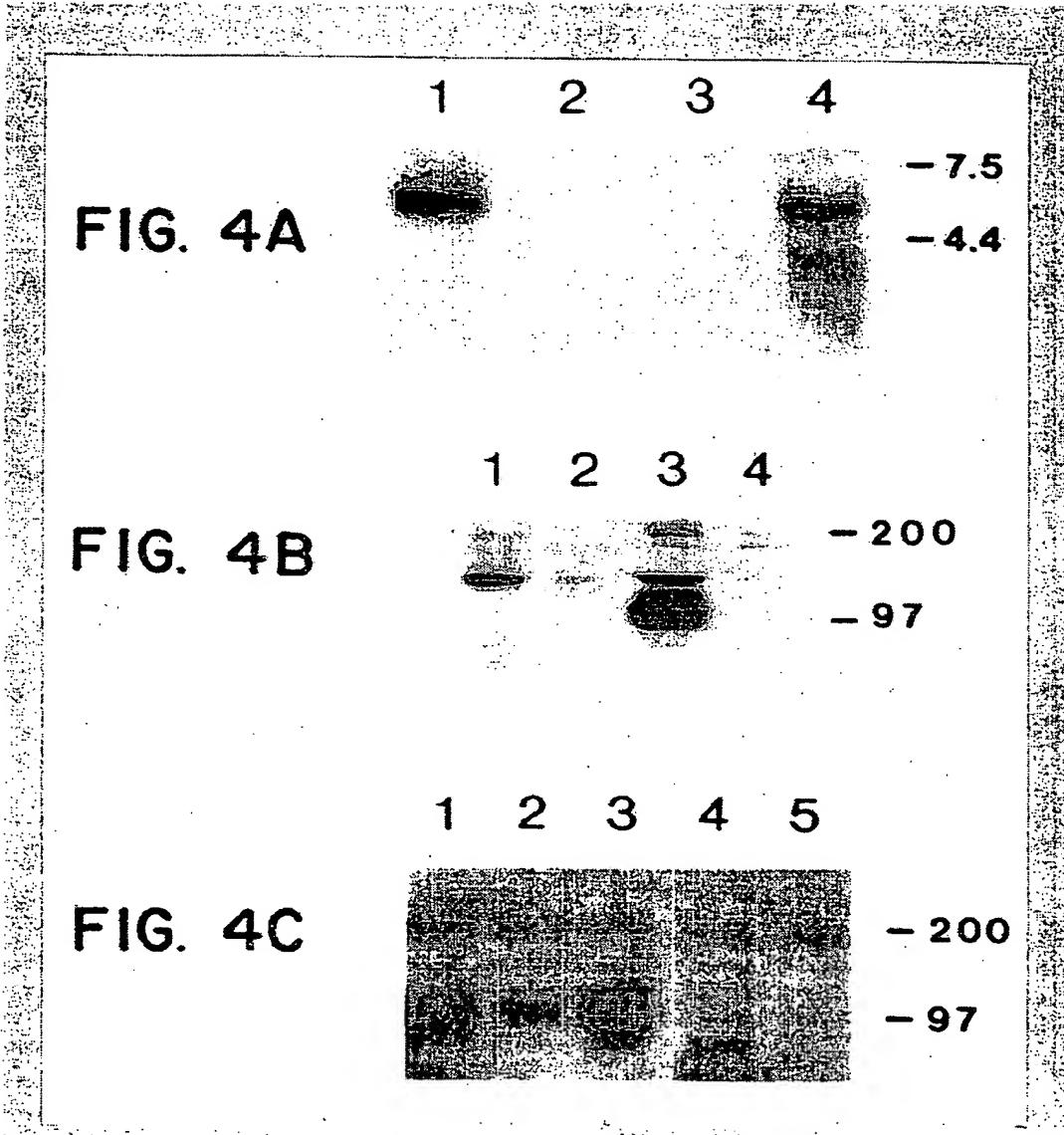
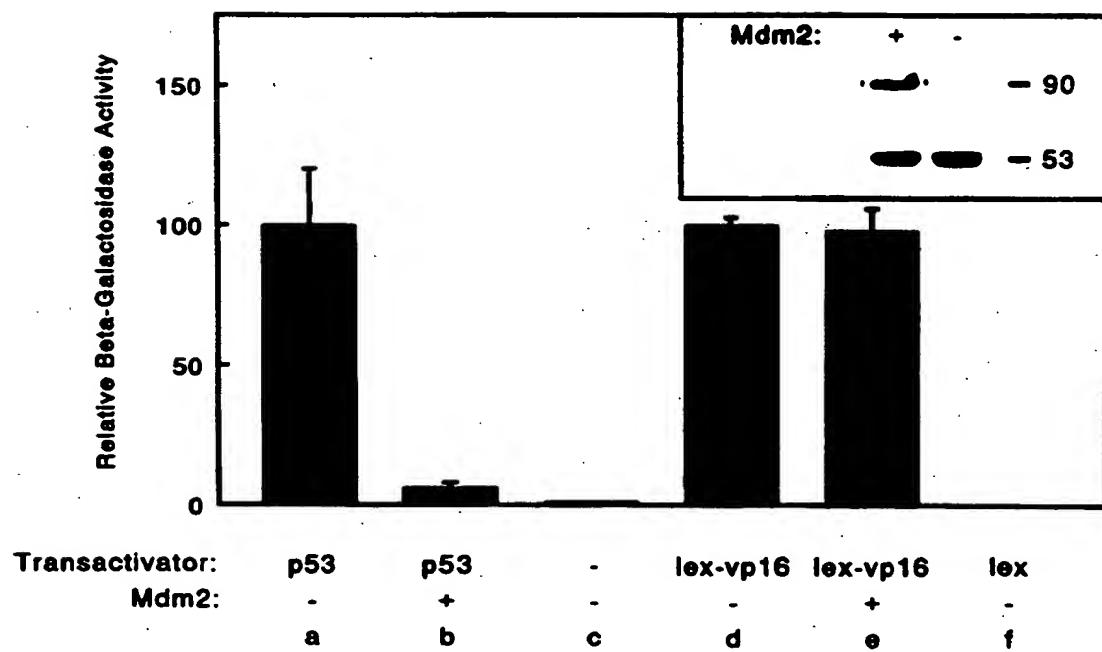




FIG. 5



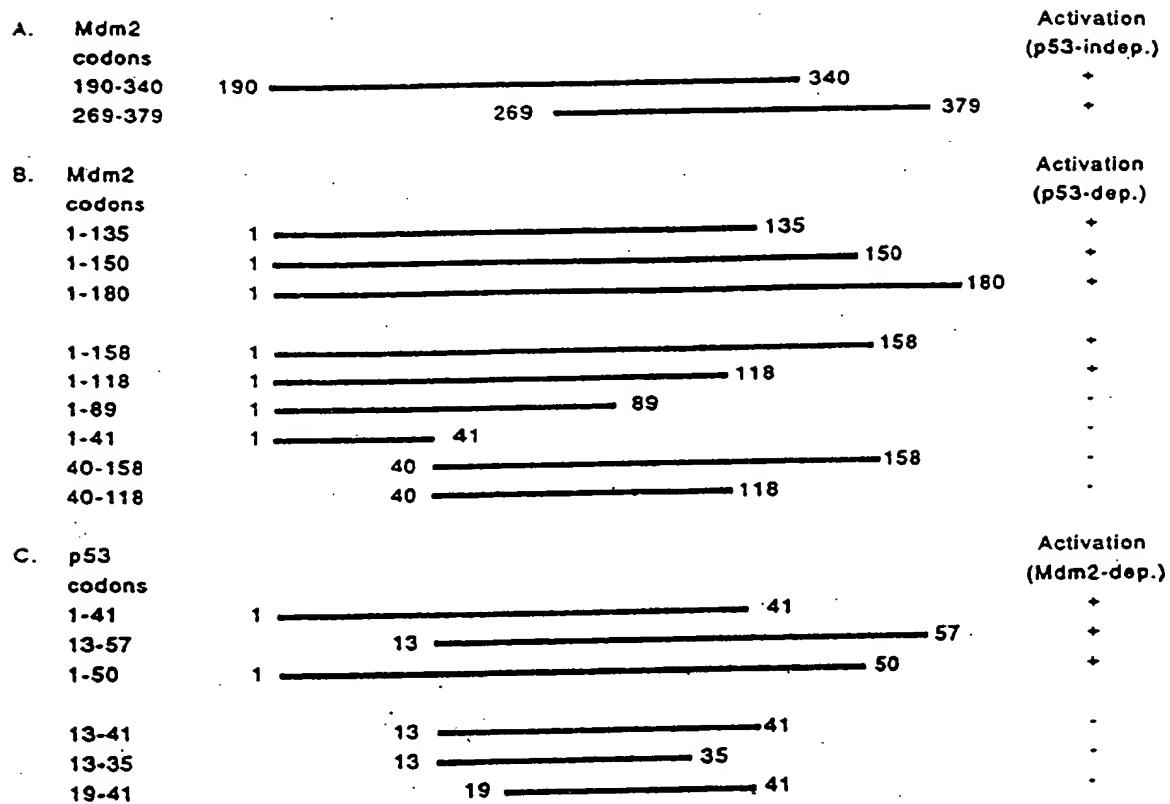


FIGURE 6



Mdm2 codons: 1-140 1-135 1-158 1-118 1-89 1-41 40-158 40-118 None

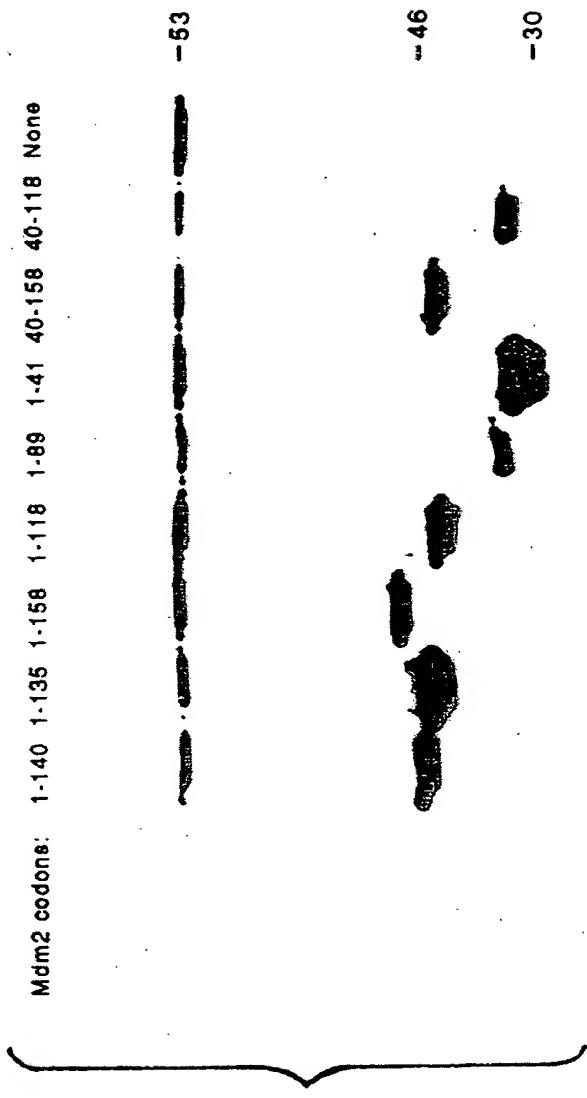


FIG. 7A

p53 codons: 13-57 1-41 13-41 19-41 13-35 None

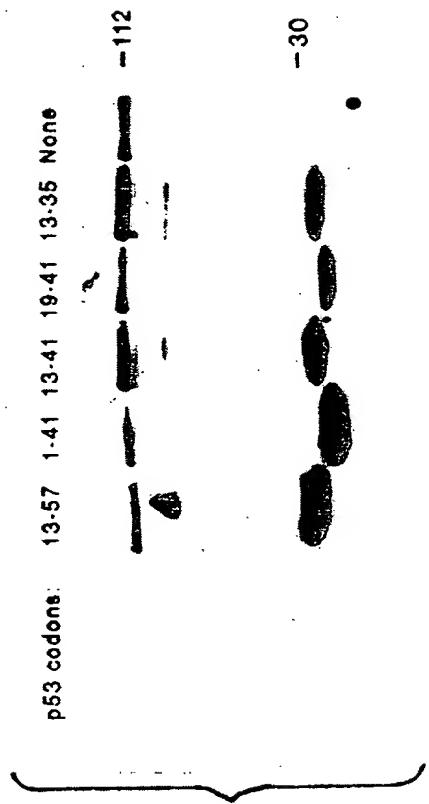


FIG. 7B



FIG. 8

